

## ABSTRACT

5 COMMUNICATION METHOD, RADIO NETWORK CONTROLLER AND  
BASE NODE FOR IMPLEMENTING THIS METHOD

In order to communicate on an uplink between a user equipment (14a)  
and a first radio network controller (12a, 15a) of a cellular network  
10 infrastructure comprising an active set of base nodes (13, 17) which each  
receive radio signals transmitted by the said user equipment, the method  
comprises the following actions: - - - - -

- the generation, in each base node of the active set, of at least a first  
frame of soft bits on the basis of the received radio signal and a  
15 corresponding first frame of hard bits;

- the transmission in the cellular network infrastructure, from each  
base node of the active set, of an accuracy indicator which results from an  
error check on the frame of hard bits;

- the transmission, to the first radio network controller, of the said first  
20 frame of hard bits from a base node (12a, 15a) whose accuracy indicator has  
a so-called "good" level, if at least one accuracy indicator has the said good  
level;

- the transmission, to the first radio network controller (12a, 15a) if no  
accuracy indicator has the said good level, of each of the first frames of soft  
25 bits from at least two base nodes and the combination in the first radio  
network controller of the transmitted frames of soft bits in order to generate a  
second frame of hard bits.

Figure 1.